



FOWL PARALYSIS AND LEUKEMIA

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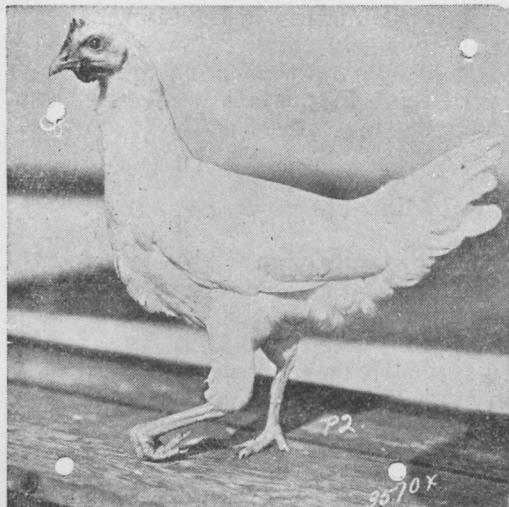
AGRICULTURAL EXTENSION SERVICE
Department of Agriculture

FOWL PARALYSIS

This disease, technically called "neurolymphomatosis," is a disease of the nerves resulting in a paralysis of the legs or wings, blindness, and also in tumorous condition in the internal organs.

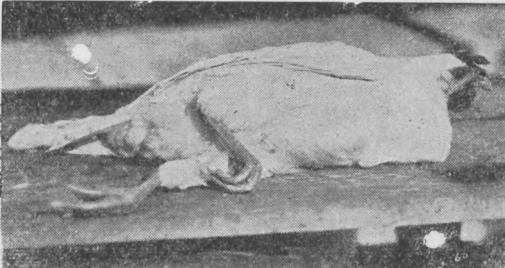
CAUSE—A filterable virus.

SYMPTOMS—Birds are usually attacked when from two and one-half to twelve months of age. The symptoms vary according to the parts affected. When the legs are affected, the bird shows a stilted, uncertain gait in walking, the toes curl up and eventually control of the legs is lost. Birds commonly lie down with one leg stretched forward



(Fig. 1)

Early Stage



(Fig. 2)

Advanced Stage

and one backward. (See Figs. 1 and 2.) When the wings are affected, they hang loosely at the side and cannot be controlled. With the eyes, a pearly appearance is the first indication, this gradually changes to a dull glazed appearance with small pupil and eventually results in blindness. Irregular thickening or malformation of the large shank bones is another indication of paralysis. When internal organs are affected, the disease is not often observed until the birds lose condition, go out of production and mortality occurs.

POST-MORTEM APPEARANCE—The nerves leading to the legs, wings, or eyes, become enlarged and take on a yellowish, creamy colour, (normal nerves are white). When internal organs are affected they are frequently misshapen and discoloured by masses of tumour.

TREATMENT—There is no known treatment.

PREVENTION—Keep birds on clean pasture and avoid overcrowding, heating or chilling, which will lower vitality. Keep the birds free from internal and external parasites.

NOTE—Paralysis can be caused by coccidiosis and worm infestations. The differentiating feature between this type of paralysis and fowl paralysis (neurolymphomatosis), is in the condition of the affected individual. With fowl paralysis, the bird is usually in good flesh, with good leg colour, while in paralysis, caused by parasitic infestation, the affected parts are thin and pale, and the shanks are usually shrivelled.

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LEUKEMIA (leucosis) (big-liver disease)

Many investigators believe there is a close relationship between leukemia and neurolymphomatosis. Leukemia is a chronic disease which requires from several weeks to several months to develop. It is quite prevalent and is a major cause of losses in fowl. The disease is undoubtedly infectious, though little is known of the mode of transmission. It can be reproduced by artificial inoculation of healthy birds. Some investigators believe red mites are responsible for some of the spread of this disease.

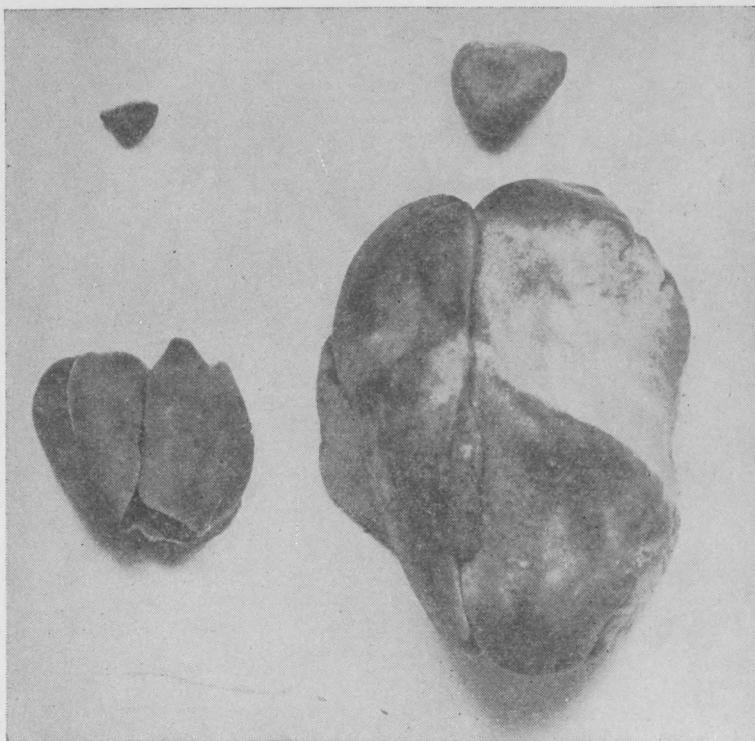
CAUSE—Unknown, but believed to be a filterable virus.

SYMPTOMS—There are no characteristic symptoms. Affected fowl often become emaciated, this emaciation being accompanied by a greenish diarrhoea.

POST-MORTEM APPEARANCE—In typical cases, the liver is greatly enlarged, and frequently the spleen and kidneys are affected. The enlarged liver may be smooth and marble-like in appearance, or may be studded with pearly nodules varying in size from a small pea to a large marble. (See Fig. 3.) (The layman often confuses leukemia with T.B. on account of this.) The liver is friable, breaking apart with slight pressure. The spleen, kidneys, heart, lungs, etc., may be similarly affected.

TREATMENT—There is no known treatment, and apart from culling there is little that can be done to control the disease, other than to practice strict sanitation.

PREVENTION—Raise young birds in absolute isolation from adults. Prevent possible spread of the disease by eliminating external parasites, and by scrupulous sanitation.



(Fig. 3)

Showing normal and leucosis liver and spleen.

—Courtesy University of Alberta.

Diagnosis of leukemia and differentiation between tuberculosis and leukemia, requires the services of a trained man or a diagnosis in a laboratory.

